

NEW CLAIMS

17. A method for manufacturing a double-walled heat exchange tube with a leak detection channel, each of the tubes having an inner surface and an outer surface;

the method comprising the steps of;

providing a surface profiling;

selectively providing one of the inner surface and said outer surface with a layer of soldering material;

expanding said inner tube such that the outer surface of the inner tube is in intimate contact with the inner surface of the outer tube and the surface profiling forms at least one leak detection channel between the two tubes;

providing the outer surface of the inner tube and the inner surface of the outer tube with a layer of soldering material;

expanding the inner tube such that the outer tube is expanded as well;

causing the layer of soldering material between the inner tube and the outer tube to be melted;

wherein the expansion of the outer tube is effected such that the molten solder is forced out between the inner tube and the outer tube into the leak detection channel.

18. The method in accordance with claim 17 wherein the inner tube is manufactured of a softer material than the material of the outer tube.

19. The method in accordance with claim 17 wherein the surface profiling is carried out of such that it occupies it most 50% of a surface.

20. The method in accordance with claim 19 wherein the surface profiling is provided in the form of a helico groove having a width of about 2mm and a pitch of about 4mm.

21. The method in accordance with claim 17 wherein the heating takes place by soldering a wire spiral wound helically on a surface of at least one of inner tube and outer tube.

22. The method according to claim 17, wherein the outer surface of the inner tube is coated with a layer of soldering material and is a surface profiling comprising at least one helically extending groove is provided.

23. The method in accordance with claim 17, wherein the outer surface of the inner tube is provided with a layer of soldering material and the inner surface of the outer tube is provided with a surface profiling in the form of longitudinally extending grooves.

24. The method in accordance with claim 17, wherein a silver weld is provided at a seam between the inner tube and the outer tube.

25. The method in accordance with claim 17 wherein at least one of the ends of the assembly of the inner tube and the outer tube at least one of the inner surface of the inner tube and the inner surface of the outer tube provided with an insulating coating of lacquer.

26. A heat exchange tube for use in a heat exchanger employing a liquid and comprising an outer tube and an inner tube disposed internally to said outer tube and retained in an abutting position under a bias pressure, to form an inner face between said inner tube and said outer tube:

a leak detection channel extending adjacent said inner face; and

a film-thin layer formed of a soldering material disposing contact with both the inner tube and the outer tube and wherein the inner tube and the outer tube are retained in abutting contact under a bias.

27. The heat exchange tube in accordance with claim 26 wherein a through opening is provided in said outer tube at a position adjacent an end of said assembly of said inner tube and outer tube and wherein said through opening is in communication with a leak detection panel.

28. The heat exchange tube in accordance with claim 26 wherein at least one of the ends of said assembly is provided with an insulating coating of lacquer and one of the inner surface of the inner tube and the outer surface of the outer tube.

29. The heat exchange tube in accordance with claim 26, wherein one of the outer surface of the outer tube and the inner surface of the inner tube is provided with fin-shaped members.

30. The heat exchange tube in accordance with claim 26, wherein fin-

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shaped members are soldered on at least an outer surface of said outer tube and wherein the fin-shaped member comprise a wire spiral helically around the outer tube and soldered to the outer tube.

31. The heat exchange tube in accordance with claim 26, wherein a surface profiling measured on a surface of one of said tubes occupies at most 50% of said surface.

32. The method according to claim 26 wherein said surface profiling comprises a helico groove having a width of 2mm and a pitch of 4mm

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